

AMENDMENTS TO THE CLAIMS

1. **(Currently amended)** An assay result reading device for reading the result of an assay performed using a test strip, the device comprising:
 - at least one light source capable of emitting light incident upon at least ~~two~~ first, second, and third spatially separated zones of the test strip, the light source comprising three light emitting diodes (LED's), each of which is aligned with and laterally offset from a corresponding test strip zone; and
 - a first baffle so sized and positioned as to prevent light emitted by the first LED from illuminating the third zone;
 - a second baffle so sized and positioned as to prevent light emitted by the third LED from illuminating the first zone;
 - a first photodetector ~~which so positioned to detect detects~~ light emanating from the first zone and the second zone; and each of the two said zones.
 - a second photodetector so positioned as to receive light emanating from the second zone and the third zone.
2. (Original) A reading device according to claim 1, further comprising a second photodetector, wherein both photodetectors are so positioned as to detect at least a portion of the light emanating from at least one of the zones of the test strip.
3. **(Currently amended)** A reading device according to claim 2, wherein the two photodetectors are positioned on opposite ~~sides~~ sides of the at least one zone and laterally offset from the at least one zone.
4. (Original) A reading device according to claim 1, wherein the at least one light source comprises three light sources.

5. (Original) A reading device according to claim 1, wherein the at least one light source comprises a light emitting diode (LED).
6. (Original) A reading device according to claim 1, wherein the photodetector comprises a photodiode.
7. (Original) A reading device according to claim 1, wherein the photodetector is positioned between the spatially separated zones and laterally offset from the zones.
8. (canceled)
9. (Original) A reading device according to claim 1, further comprising a housing enclosing the at least one light source and the photodetector.
10. **(Currently amended)** A reading device according to claim 9, wherein the housing is ~~no larger than~~ about 12 cm long or less, about 2.5 cm wide or less, and about 2.2 cm tall or less.
11. **(Currently amended)** A reading device according to claim 1, wherein the at least one light source and the photodetector are disposed within an area ~~no larger than~~ about 1 square centimeter or less.
12. **(Currently amended)** A reading device according to claim 1, wherein the at least one light source and the photodetector are disposed within an area ~~no larger than~~ about 0.7 square centimeter or less.
13. (Original) A reading device according to claim 1, further comprising:

a computation circuit responsive to signals generated by the photodetector representing the presence or absence of a fluid sample in at least one of the zones to:
calculate a flow rate for a fluid flowing along the test strip;
compare the calculated flow rate to upper and lower limits; and
reject the assay result if the calculated flow rate is outside the upper and lower limits.

14. (Original) A reading device according to claim 1, further comprising:
a computation circuit, responsive to an input signal representing the amount of an analyte or the rate of accumulation of an analyte in at least one of the zones of the test strip, to:
compare the input signal to a first threshold;
compare the input signal to a second threshold, the second threshold being less than the first threshold;
generate an output signal if the input signal exceeds the first threshold or the input signal is less than the second threshold, the output signal indicative of a first result if the input signal exceeds the first threshold, or, alternatively, the output signal indicative of a second result if the input signal is less than the second threshold; and
terminate the assay if the input signal exceeds the first threshold or the signal is less than the second threshold.
15. (Original) A reading device according to claim 14, further comprising:
a computation circuit responsive to signals generated by the photodetector representing the presence or absence of a fluid sample in at least one of the zones to:
calculate a flow rate for a fluid flowing along the test strip;
compare the calculated flow rate to upper and lower limits; and
reject the assay result if the calculated flow rate is outside the upper and lower limits.

16. **(Currently amended)** An assay result reading device for reading the result of an assay performed using a test strip, the device comprising:
- at least one light source capable of emitting light incident upon at least ~~one~~ zone first, second, and third zones of the test strip; and
 - at least two photodetectors, ~~each~~ the first of which detects light emanating from the ~~at least one~~ first zone and second zone of the test strip; ~~and the second of which detects light emanating from the second zone and the third zone of the test strip.~~
17. **(Currently amended)** A method of determining the result of an assay performed using a test strip, the method comprising:
- positioning ~~the a~~ a test strip, having first, second, and third spatially separated zones, in relation to an assay result reader, the reader comprising a housing enclosing at least ~~one light source and a photodetector~~ at least three light sources and two photodetectors; and
 - measuring ~~a~~ at least one light level received by ~~the~~ at least one photodetector; wherein: ~~the test strip is so positioned that the at least one light source emits light incident on at least two spatially separated zones of the test strip, and so that light emanating from at least one of the zones is incident on the photodetector.~~
 - each light source is aligned with and laterally offset from a corresponding test strip zone;
 - the first photodetector is so positioned as to receive light emanating from the first zone and the second zone; and
 - the second photodetector is so positioned as to receive light emanating from the second zone and the third zone.

18. A method according to claim 17, wherein the test strip is positioned at least partly inside the assay result reader.

Claims 19-20 (canceled)

21. **(New)** An assay result reading device for reading the result of an assay performed using a test strip, the device comprising:
- at least one light source capable of emitting light incident upon at least two spatially separated zones of the test strip;
 - a photodetector which detects light emanating from each of the two said zones;
 - and
 - a computation circuit responsive to signals generated by the photodetector representing the presence or absence of a fluid sample in at least one of the zones to:
 - calculate a flow rate for a fluid flowing along the test strip;
 - compare the calculated flow rate to upper and lower limits; and
 - reject the assay result if the calculated flow rate is outside the upper and lower limits.
22. **(New)** An assay result reading device for reading the result of an assay performed using a test strip, the device comprising:
- at least one light source capable of emitting light incident upon at least two spatially separated zones of the test strip;
 - a photodetector which detects light emanating from each of the two said zones;
 - and
 - a computation circuit responsive to signals generated by the photodetector representing the presence or absence of a fluid sample in at least one of the zones to:
 - calculate a flow rate for a fluid flowing along the test strip;

compare the calculated flow rate to upper and lower limits; and
reject the assay result if the calculated flow rate is outside the upper
and lower limits.

23. **(New)** A device, comprising:
a housing configured to retain a test strip in a test position;
a light source system configured to illuminate selectively first, second, and third
different zones of a test strip retained in the test position;
a first light detector configured to (a) detect light from the first zone of a test strip
retained in the test position when the light source illuminates the first zone,
and (b) detect light from the second zone of a test strip retained in the test
position when the light source illuminates the second zone;
a second light detector configured to (a) detect light from the third zone of a test strip
retained in the test position when the light source illuminates the third zone,
and (b) detect light from the second zone of a test strip retained in the test
position when the light source illuminates the second zone; and
a processor configured to receive respective signals indicative of light detected by the
first and second light detectors.
24. **(New)** The device of claim 23, wherein the housing is configured so that a liquid
sample can be applied to a test strip retained in the test position.
25. **(New)** The device of claim 24, further comprising a test strip retained in the test
position.
26. **(New)** The device of claim 25, wherein the housing completely encloses the first,
second, and third zones of the test strip.

27. **(New)** The device of claim 25, wherein the test strip comprises a lateral flow away test strip.
28. **(New)** The device of claim 27, wherein the test strip is configured to allow the liquid sample to flow along the test strip between at least two of the first, second, and third zones, and the processor is configured to determine a flow rate of the liquid based on signals received from at least one of the first and second light detectors.
29. **(New)** The device of claim 28, wherein the processor is configured to determine the flow rate of the liquid based on signals received from both the first and second light detectors.
30. **(New)** The device of claim 28, wherein the processor is configured to determine the presence of an analyte based on signals received from at least one of the first and second light detectors.
31. **(New)** A method, comprising:
allowing a liquid to advance along a test strip after having been applied thereto;
illuminating a first zone of the test strip with light from a first light source;
detecting light from the illuminated first zone using a first light detector;
illuminating a second zone of the test strip with light from a second light source;
detecting light from the illuminated second zone using the first light detector;
detecting light from the illuminated second zone using a second light detector;
illuminating a third zone of a test strip with light from a third light source;
detecting light from the illuminated third zone using the second light detector;
receiving respective signals from the first and second light detectors, the signals
indicative of the detected light; and
determining a rate at which the liquid advances along the test strip based on the
received signals.

32. **(New)** The method of claim 31, further comprising determining the presence in the liquid of an analyte based at least in part on light detected by the first and second light detectors.
33. **(New)** The method of claim 31, wherein illuminating the second zone comprises illuminating the second zone at least twice and detecting light from the illuminated second zone using the first detector is performed at a different time from detecting light from the illuminated second zone using the second detector.